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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,995	11/30/2001	Giovanni Frezza	856063.722	3898

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EXAMINER
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NADAV, ORI

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/997,995

Applicant(s)

FREZZA, GIOVANNI

Examiner

Ori Nadav

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19,21,22,24,27-29,31-33,36 and 38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19,21,22,24,27-29,31-33,36 and 38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 22, 29, 31-33, 36 and 38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no adequate description in the disclosure how to form a device comprising a protective package having a window over the pressure sensor of the electronic device and an electronic device activated through a projecting portion wherein the projecting portion is shaped to form a ring or is surrounded by dyke or barrier and formed on a surface of the electronic device, as recited in claims 22, 27, 29 and 31, in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 22, 29, 31-33, 36 and 38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable

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one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. There is no adequate description in the disclosure how to form a device comprising a protective package having a window over the pressure sensor of the electronic device and an electronic device activated through a projecting portion wherein the projecting portion is shaped to form a ring or is surrounded by dyke or barrier and formed on a surface of the electronic device, as recited in claims 22, 27, 29 and 31, in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19, 21-22, 24, 27-29, 31-33, 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamawaki et al. (4,894,707) in view of Nomura et al. (5,948,991).

Regarding claims 22, 29, 31 and 38, Yamawaki et al. in figures 5g and related text a packaged electronic device ready for electronic use, comprising:

a semiconductor integrated electronic circuit including an image sensor;

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a plastic protective package 9 surrounding and supporting the electronic circuit, the protective package having a window over the electronic device 1 such that the electronic device can be at least partially activated from outside of the protective package; and

a portion on the electronic circuit is surrounded by ring shaped dyke or barrier 3 formed on the electronic circuit.

Yamawaki et al. do not teach a projecting portion of elastic material projecting from a surface of the electronic device into the window.

Nomura et al. teach in figure 6 and related text a projecting portion of elastic material 132 projecting from a surface of the electronic device 130 into the window, wherein the projecting portion being structured to enable the electronic device to be activated through the projecting portion when the electronic device is in use.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a projecting portion of elastic material projecting from a surface of the electronic device into the window of Yamawaki et al.'s device in order to provide better protection to the chip.

Regarding claims 21, 24, 28, 32, 33 and 36, prior art's device teaches a protective package also contacts the top of the electronic circuit adjacent to the window, wherein the window is defined by tapering walls that taper inwardly toward the electronic circuit, and wherein the electronic circuit includes a proximity sensor.

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Regarding claims 19, 27 and 31, Yamawaki et al. in figures 5g and related text a packaged electronic device ready for electronic use, comprising:

a semiconductor integrated electronic circuit including an image sensor;

a plastic protective package 9 surrounding and supporting the electronic circuit, the protective package having a window over the electronic device 1 such that the electronic device can be at least partially activated from outside of the protective package; and

a projecting portion of elastic material 3 projecting from a surface of the electronic device into the window, the projecting portion being structured to enable the electronic device to be activated through the projecting portion when the electronic device is in use, wherein said projecting portion 3 is shaped to form a ring on the electronic circuit.

Yamawaki et al. do not teach a pressure sensor chip.

Nomura et al. teach in figure 6 and related text a pressure sensor 130 chip.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a pressure sensor chip in Yamawaki et al.'s device in order to use the device in an application which requires a pressure sensor chip.

### ***Response to Arguments***

Applicant argues that there is adequate description in the disclosure how to form a device comprising a protective package having a window over the pressure sensor of the electronic device and an electronic device activated through a projecting portion

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wherein the projecting portion is shaped to form a ring or is surrounded by dyke or barrier and formed on a surface of the electronic device, as recited in claims 22, 27, 29 and 31.

The disclosure describes in figures 2A-2B a device comprising a protective layer 50 having a flat top surface, and a ring shaped dyke or barrier embedded therein. There is no adequate description in the disclosure how to form a device comprising a protective package having a window over the pressure sensor of the electronic device and how the ring shaped dyke or barrier is formed so as to be embedded inside the protective layer, as recited in claims 22, 27, 29 and 31.

Applicant argues that there is no motivation for combining Yamawaki with Nomura, because the Yamawaki device includes a rigid glass window pane 12 that would prevent proper operation of the device if the optical device 1 of Yamawaki were replaced with the pressure-sensitive chip 130 of Nomura, and nothing in Yamawaki or Nomura would motivate one to remove the glass window pane 12.

Regarding claims 22, 29, 31 and 38, the examiner does not suggest to remove the glass window pane 12 of Yamawaki, and does not suggest that the optical device 1 of Yamawaki should be replaced with the pressure-sensitive chip 130 of Nomura. The examiner suggests using the projecting portion of elastic material 132 of Nomura in the window of Yamawaki et al.'s device in order to provide better protection to the chip.

Regarding claims 19, 27 and 31, applicant did not provide any evidence that the rigid glass window pane 12 in Yamawaki's device would prevent proper operation of the

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device if the optical device 1 of Yamawaki were replaced with the pressure-sensitive chip 130 of Nomura.

Applicant argues that one would simply use the Nomura pressure sensor device rather than trying to modify the Yamawaki optical device to become a pressure sensor.

The issue is not an artisan arbitrarily choosing any pressure sensor device. The issue is an artisan wishing to use the advantageous Yamawaki's device in a pressure sensor application.

Applicant argues that the protective member 132 of Nomura extends across the entire top surface of the device 130 while the elastic wall 3 of Yamawaki is positioned away from the edges of the device 1, and thus the protective member 132 would completely cover the elastic wall 3 on three sides, and the elastic wall 3 would not surround the protective member 132.

Prior art's structure is identical to applicant's structure. Applicant also describe in figure 2 of the claimed invention a protective member 9, 51 extends across the entire top surface of the device while the wall 52 is positioned away from the edges of the device. Therefore, the protective member completely covers the wall on at least three sides. If applicant's wall 52 surrounds the protective member so does prior art's wall.

Applicant argues that there is no suggestion that the elastic material of Nomura could or should be used to provide better protection to the Yamawaki device, because



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the glass window pane 12 of Yamawaki already closes the opening in the resin package 9, so there is no need to add the elastic material 132 of Nomura to the Yamawaki device.

Although the glass window pane 12 of Yamawaki closes the opening in the resin package 9, the glass window pane 12 of Yamawaki does not provide the same protection to the device as is provided by the elastic material 132 of Nomura which protects the chip against contamination. Therefore, it would be obvious to use the elastic material of Nomura in Yamawaki device.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ori Nadav whose telephone number is 571-272-1660. The examiner can normally be reached between the hours of 7 AM to 4 PM (Eastern Standard Time) Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



O.N.  
5/25/06

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